TWO NEW SPECIES OF PARMELIA (LICHENS) FROM NORTH AMERICA

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Parmelia louisianae Hale, sp. nov.

Thallus ut in P. hypotropa Nyl. sed differt acidum alectoronicum continente.

Holotype: On oak in oak-pine forest, 3 miles N Sabine Co. line on highway 175, DeSoto Co., Louisiana, collected by M. E. Hale, no. 34013 (US; isotypes in DUKE, UPS).

Parmelia louisianae, a species in subgenus Amphigymnia, has the broad white margin below and strong white maculation in the upper cortex so characteristic of P. hypotropa, a very widespread lichen in southern United States containing norstictic acid (see Hale, 1965, p. 205). In spite of the morphological similarity, however, P. louisianae is probably more closely related to P. rigida Lynge, its presumptive nonsorediate counterpart, which occurs in the lower coastal plain and in South America. Both specimens examined are sterile.

Additional specimen examined: Louisiana: 4.5 miles NE Vivian, Caddo Parish, Thieret 24473 (LAF, US).

Parmelia weberi Hale, sp. nov.

Thallus adnatus, saxicola, 4-6 cm latus, firmus, pallide albido-viridis, lobis sublinearibus vel subirregularibus ut in P. subramigera Gyel., 2-3 mm latis, superne nitidus, planus vel aetate rugosus, plus minusve transversim rimosus, isidiatus, isidiis simplicibus vel subcoralloideo-ramosis, cylindricis, usque ad 0.3 mm diametro, frequenter apice ruptis truncatisque, cortex superior 12-15μ, stratum gonidiale 25-30μ, medulla alba, 160-190μ crassa, cortex inferior 14-18μ crassus, subtus pallide stramineus, modice rhizinosus, rhizinis pallidis, simplicibus. Apothecia rara, adnata, 2-4 mm diametro, sporis octonis, 4 X 8μ. Cortex K+ flavescens, medulla K-, P-, C+, KC+ roseus, acidum usnicum, acidum hypoprotocetraricum, et materia alia ignota continente.

Holotype: Desert Mtns., 3 miles SW Superior, elev. 2750 ft., just south of Picketpost Mountain, near Southwestern Arboretum, Pinal Co., Arizona, collected by W. A. Weber and J. B. McCleary,

no. S1897, 2 Jan. 1953 (COLO; isotype in US).

Parmelia weberi was first recognized as a P negative Xanthoparmelia from western United States which gave a dense acetone residue and a distinct H_2SO_4+ blue spot on TLC plates. Dr. C. F. Culberson kindly identified the main constituent as hypoprotocetraric acid (with unidentified accessory acids). Having finally established the identity of this unusual population, I found a number of other records in the United States and Mexico and in Africa. Species with hypoprotocetraric acid are rather common in Africa, but P. weberi is the first Xanthoparmelia from the New World with this acid.

Morphologically P. weberi is very close to widespread P. subramigera Gyel., which contains P+ red fumarprotocetraric acid and generally has less dense, thinner isidia but a similar very pale lower surface.

Additional specimens examined. Arizona: 10 miles NE Tucson, Pima Co., Richards et al. 538 (F). New Mexico: 3.5 miles SE of Correo on road to Las Lunas, Valencia Co., Shushan and Weber S6872 (COLO). Mexico: 71 miles S of La Zarea on highway 45 to Durango, Durango, Weber and Charette 33596 (COLO); west of Baviácora, Sonora, Drouet and Lockhart 657 (F), 15 miles S of Naiozari, Sonora, Richards et al. 694 (F). Kenya: near Ngulia Hills, Machakos distr., Vericourt 3698 (BM, US). Uganda: 1 km NE of Kansambia Hill, distr. Masaka, Lye L231 (US); Entebbe Botanical Garden, distr. W. Mengo, Swinscow U10/12 (US). Union of South Africa: Krantzkop near Nystrom, Kofler 37153 (LD); Indumeni Forest, Cathedral Peak Area, distr. Bergville, Almborn 8931, 8932 (LD, US); Upper Umkomaas, Impendhle, Höeg (TRH).

Literature Cited

Hale, M. E. 1965. A monograph of Parmelia subgenus Amphigymnia. Contr. U. S. Nat. Herb. 36:193-358.